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AUTHOR	Horowitz, Joseph L; And Others
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ABSTRACT

The freshman, sophomore and junior year grades of 126 black and 178 white freshmen entering the University of Maryland were used as criterion measures in this study on prediction of academic achievement as reflected in grades. Predictors included the Scholastic Aptitude Test (SAT), high school grade point average (HSGPA), the California Psychological Inventory (CPI), the Holland Vocational Preference Inventory (VPI), items from the University Student Census (USC), a locally developed attitude and demographic inventory, and information from admissions files on high school extracurricular activities. It was found that the black student who had good high school grades, is conscientious, independent, self confident, is interested in social service jobs, and feels the University should take an active role in changing society will tend to get higher grades at the University. The SAT and high school grades were a consistent predictor across the 3 years for whites. (Author/HS)

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The writers wish to thank Albert S. Farver for developing some of the data for the study.

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SUMMARY

The freshman, sophomore and junior year grades of 126 black and 178 white freshmen entering the University of Maryland, College Park, were used as criterion measures. Predictors included the Scholastic Aptitude Test (SAT), high school grade point average (HSGPA), the California Psychological Inventory (CPI), the Holland Vocational Preference Inventory (VPI), items from the University Student Census (USC), a locally developed attitude and demographic inventory administered in the summer of 1968 and fall of 1969, and information from admissions files on high school extracurricular activities. Not all students had complete data on all predictors. All predictor data except the 1969 USC were gathered prior to fall 1968. Data were analyzed using multiple regression, zero order Pearson correlation, point biserial correlation and eta (correlation ratio) at the .05 level of significance.

Neither the SAT nor high school grades was a consistent predictor across the three years for blacks but they were for whites. The predictors of black student grades that are consistent in the freshman year and beyond appear to be CPI Socialization and Achievement Via Independence, VPI Masculinity (negative correlate) and Infrequency, HSGPA, feeling he or she has the ability but maybe not the finances to obtain a degree and feeling the University should improve social conditions in the state. Thus, the black student who had good high school grades, is conscientious, independent, self confident, is interested in social service jobs, and feels the University should take an active role in changing society will tend to get higher grades at College Park. Also, the successful black student was more likely to rely on patience and self restraint in the junior year than in the freshman year and was less likely to have been in high school student government. The successful black student will likely have an unusual profile on a typical personality inventory.

Thus, as long as predictions are being made *on the average*, general regression equations based on the SAT and HSGPA will likely do the best job. If, however, one is concerned that our educational system does not do injustice to a group smaller in numbers or power, then it must reflect our culturally pluralistic society. Alternative predictors for both blacks and others must be developed. This study offers empirical evidence for alternative predictors for blacks.

The search for correlates of student success in college has long interested educational researchers. Recently attention has focused on predictors of black student performance. While there have been an increasing number of studies indicating that the same predictors work about as well for black or white students (e.g., Thomas and Stanley, 1969; Pfeifer and Sedlacek, 1971), there also exist studies with contrary or unexplained findings (e.g., Clark and Plotkin, 1964; Green and Farquhar, 1965; Cleary, 1968; Pfeifer and Sedlacek, 1970a & b, 1971, 1973). However, despite this focus, relatively few good research studies on black students have been conducted. Sedlacek (1972) summarized some of the reasons for this situation as (1) sampling problems which rarely if ever allow the study of a broad range of blacks; (2) most studies conducted are one shot investigations which are limited in their ability to build on previous work; (3) few studies have examined the relationships between predictors and criteria beyond the freshman year. It is likely that many blacks may require a longer period of adjustment to higher education, particularly those attending primarily white universities. For instance, DiCesare, Sedlacek and Brooks (1972) found that blacks who were realistic about the racism and adjustment problems they would face on a primarily white campus were more likely to stay in school than those expecting fewer problems.

The Cultural Study Center at the University of Maryland has begun a three phase research program aimed at answering the broad research question "Is there anything that could be called a unique black experience or experiences which could be measured and translated into practical terms?" The Cultural Study Center is interdisciplinary and interracial. The program was begun because of the feeling that it was inappropriate to conduct one shot studies and that only a sustained and systematic effort would have a reasonable chance of success. The first phase of the research was to examine the utility of currently used predictors and

criteria. The second phase involves examining currently available variables for use as potential predictors and the third phase will be taking what is learned from the first two phases and working with a variety of blacks on and off campus to develop predictors and criteria that reflect their experiences.

The purpose of the current study was to examine correlates of black university student grades beyond the freshman year.

Method

All students entered the University of Maryland in September, 1968, and freshman, sophomore and junior year grades (individual year and cumulative) were used as criterion measures (MdGPA). Continuous registration (excluding summer) was required of all students in the study. All subjects were included in Pfeifer and Sedlacek's (1973) study of correlates of freshman grades. Table 1 shows the sample sizes for each year.

Predictors included the Scholastic Aptitude Test (SAT), high school grade point average (HSGPA), the California Psychological Inventory (CPI), the Holland Vocational Preference Inventory (VPI), items from the University Student Census* (USC), a locally developed attitude and demographic inventory administered in the summer of 1968 and fall of 1969, and information from admissions files on high school extracurricular activities. Not all students had complete data on all predictors. All predictor data except the 1969 USC were gathered prior to fall 1968.

Data were analyzed using multiple regression, zero order Pearson correlation, point biserial correlation and eta (correlation ratio) at the .05 level of significance.

*available from writers on request

Results

Table 2 shows means and standard deviations for SAT, HSGPA, MdGPA, CPI and VPI for each sample studied. Tables 3 and 4 show zero order Pearson correlations of CPI and VPI with MdGPA for each sample studied. Table 5 shows multiple correlations and multiple regression equations predicting MdGPA for each sample studied.

Table 3 shows that the CPI Achievement Via Independence scale was a consistently significant correlate of grades in all years for blacks and whites. Intellectual Efficiency was significant in the freshman year for blacks and sophomore year for whites, but dropped off in the junior year for both blacks and whites. Socialization held up as a positive correlate of freshman and junior grades for blacks but was not significant after the freshman year for whites. Self Control, Tolerance and Femininity were consistently significant positive correlates of grades for whites in all years but did not achieve significance for blacks. Communality was significant for freshman blacks but not for whites, but was not significant in future years for either group. The Social Presence scale was not significant at all for whites and was not significant until the junior year for blacks.

Table 4 shows that for the VPI (blacks and whites) the Social scale tended to correlate significantly with freshman grades, but less so with grades beyond the freshman year. The Masculinity scale remained a consistent negative correlate of grades in all years for both blacks and whites. The Infrequency scale was generally a positive correlate of grades for blacks and a negative or zero correlate for whites. The Artistic scale of the VPI was a consistent significant positive correlate of grades for whites in all years but was not significant for blacks in any year.

The regression equations in Table 5 show that positive predictors of black student success tend to be HSGPA and CPI Achievement Via Independence in the first two years, SAT-Verbal for the freshman year only and CPI Socialization and VPI Infrequency in the freshman and junior year. HSGPA and SAT-Verbal were consistent positive predictors for whites in all years. CPI Masculinity was a consistent negative predictor for whites in all years.

Results Not Shown in Tables

USC item (34) "The University should use its influence to improve social conditions in the state" was a significant positive correlate of black student grades in all years, ranging from .23 in the freshman year to .30 for junior year grades. Item 34 was not a significant correlate of white student grades in any year. USC item 39 "Most courses require intensive study and preparation outside the classroom" was a *negative* correlate of black student grades for sophomore year (-.29), sophomore cumulative (-.33) and junior cumulative (-.25) grades. Item 39 was not significant for whites in any year. Items 30 "Most of my courses are stimulating and exciting" and 32 "Most instructors here act like they really care about students" were negative correlates (-.22 and -.23) of grades for blacks in the freshman year but not in later years for blacks or any year for whites. Agreement with the statement "I was a leader in high school" correlated (.22) with sophomore year grades for blacks.

Being a member of a high school honor society was a correlate (point biserial) of black student freshman (.27) and sophomore cumulative (.23) grades. Being a student government office holder in high school was a significant positive correlate of black freshman grades (.21) but a significant negative correlate of junior year (-.33) and junior cumulative (-.23) grades for blacks.

Eta coefficients yielded few significant relationships between categorical USC items and grades for blacks or whites. Generally blacks who indicated financial difficulties as their most probable reason for leaving school got higher grades than those who felt their lack of academic ability might cause them to leave.

Discussion

Before discussing the results the reader is reminded of several methodological shortcomings in the study. First, the samples were small and varied from year to year. Since blacks and whites may leave school at different times for different reasons it is not known how this affected the samples available each year. Additionally, restricted ranges on most variables occurred from freshman to junior years (see Table 2) which would tend to depress correlations. Also, since so many significance tests were made, it is likely some of the findings are due to chance. However, the results did show consistency and even the regression equations appeared stable despite the lack of cross validation. Overall then, the results appear worth further discussion and analysis.

Generally the results show that it is possible to develop predictors of grades beyond the freshman year. While there were findings in common for blacks and whites, the uniquely black predictors will be emphasized but not exclusively discussed below.

The predictors of black student grades that are consistent in the freshman year and beyond appear to be CPI Socialization and Achievement Via Independence, VPI Masculinity (negative correlate) and Infrequency, HSGPA, feeling he or she has the ability but maybe not the finances to obtain a degree and feeling the University should improve social conditions in the state. Thus, the black student who had good high school grades, is conscientious, independent, self

confident, is interested in social service jobs, and feels the University should take an active role in changing society will tend to get higher grades at College Park. Also, the successful black student was more likely to rely on patience and self restraint in the junior year than in the freshman year (VPI Social Presence - see Table 4) and was less likely to have been in high school student government. The successful black student will likely have an unusual profile on a typical personality inventory (VPI Infrequency - see Table 4).

These results appear quite compatible with previous studies. For instance, Pfeifer and Sedlacek (1970b, 1973) discussed the importance of a variable such as VPI Infrequency which tends to predict grades positively for blacks and negatively for whites in this study. They point out that by expressing their own culture in completing a white-normed inventory, blacks may appear deviant or maladjusted since the Infrequency scale was designed to identify infrequent or uncommon responses to the VPI (Holland, 1965). Thus, the value of developing black norms, or better yet inventories and tests relevant to blacks has some empirical support in this study.

An interesting and related point should be made regarding the SAT and HSGPA. Results of this study indicate that if one considers nonintellectual variables, the SAT has less predictive utility after the freshman year and HSGPA after the sophomore year for blacks, while both predictors were useful for whites in all years. Sedlacek and Brooks (1972a) found that the SAT-Math and HSGPA actually had *negative* validity for one sample of blacks in a special program. That is, the higher blacks scored on the SAT, the worse were their college grades. Other studies have shown a consistent lack of validity for HSGPA as a predictor of college grades for black males (Thomas and Stanley, 1969; Pfeifer and Sedlacek, 1971). Despite these and other data, standardized tests and HSGPA continue to be

the most common admissions devices used across the country (Sedlacek and Brooks, 1970; Sedlacek, Brooks and Horowitz, 1972; Sedlacek, Brooks and Mindus, 1972). These studies report that in the large white universities there were only 3% new black freshmen in 1969, rising to 4% in 1970 and holding at 4% in 1971. Additionally, an overall decrease of black freshman enrollment in all types of institutions occurred from 9% in 1970 to 6% in 1971 (Sedlacek, Brooks and Mindus, 1972). Thus, if inappropriate predictors are used to select blacks to colleges and universities, black enrollment is not likely to increase.

Considering the evidence of this and other studies, it is likely that attendance at a predominantly white university is a much different experience for a black than it is for a white (Sedlacek, 1972; Pfeifer and Sedlacek, 1973). The black must face a pre-admission decision: to attend a predominantly white school and face possible racism (Sedlacek and Brooks, 1972b); or attend a predominantly black school which may have fewer facilities and offerings. The adjustments required under these conditions are difficult for some blacks (DiCesare, Sedlacek and Brooks, 1972) and it seems probable that predictors of success for blacks would be related to nonacademic variables. Thus, as long as predictions are being made *on the average*, general regression equations based on the SAT and HSGPA will likely do the best job. If, however, one is concerned that our educational system does not do injustice to a group smaller in numbers or power, then it must reflect our culturally pluralistic society. Alternative predictors for both blacks and others must be developed. This study offers empirical evidence for alternative predictors for blacks.

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TABLE 1

Sample Sizes for Each Year*

	1968-69 FRESHMEN	1969-70 SOPHOMORES	1970-71 JUNIORS
Blacks	126	105	80
Whites	178	134	110
Total	304	239	190

* Freshmen represent all entering blacks and a random sample of whites. Sample sizes vary due to incomplete predictor data for freshmen and attrition in later years.

TABLE 2

Means and Standard Deviations for Grades, SAT, CPI and VPI Scores for Samples Studied

	VARIABLE	BLACK FRESHMEN		BLACK SOPHOMORES		BLACK JUNIORS		WHITE FRESHMEN		WHITE SOPHOMORES		WHITE JUNIORS	
		MEAN	S.D.	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.
1	SAT-Verbal	421.65	76.33	438.33	67.16	446.53	60.23	498.97	93.87	509.92	99.16	516.78	97.54
2	SAT-Math	427.47	86.85	442.31	85.75	446.18	78.98	531.25	99.61	533.20	100.23	540.97	100.58
3	HSGPA[a]	2.77	0.95	2.84	0.93	2.90	0.96	3.12	1.00	3.39	0.98	3.46	0.93
	CPI												
4	Dominance	24.67	6.07	24.60	5.47	25.00	5.04	25.72	6.72	25.82	6.44	25.66	6.53
5	Capacity for Status	16.44	4.03	16.22	3.67	16.70	3.33	17.89	4.17	18.11	4.11	18.13	4.13
6	Sociability	22.78	4.81	22.48	4.56	22.64	4.49	23.74	5.57	23.69	5.60	23.59	5.62
7	Social Presence	31.52	5.52	31.41	4.86	31.95	4.23	33.91	6.63	33.87	6.74	33.83	6.68
8	Self Acceptance	20.57	4.02	20.66	3.54	20.70	3.70	21.41	4.28	21.30	4.21	21.14	4.41
9	Sense of Well Being	30.41	6.85	30.53	6.28	30.84	6.21	32.22	6.66	32.90	6.43	33.24	6.15
10	Responsibility	28.13	5.31	38.40	4.99	28.43	5.05	28.59	5.50	29.15	5.50	29.48	5.30
11	Socialization	36.51	6.50	37.10	5.90	37.25	5.59	36.53	7.05	37.23	6.94	37.66	7.03
12	Self Control	25.37	8.25	25.05	8.71	24.91	9.25	24.09	8.82	25.21	8.71	25.51	8.28
13	Tolerance	17.51	5.05	17.19	4.86	17.36	4.96	19.65	5.19	20.48	4.98	20.61	4.65
14	Good Impression	14.91	5.74	14.41	5.87	14.75	6.43	14.22	6.27	14.72	6.38	14.68	5.84
15	Communality	24.11	3.53	24.53	2.99	24.70	2.47	25.04	3.34	25.32	3.16	25.36	3.29
16	Achievement Via Conformance	24.82	4.84	25.02	4.53	25.00	4.54	24.13	5.45	24.59	5.42	24.97	5.12
17	Achievement Via Independence	16.52	4.38	16.72	4.02	16.73	3.53	18.10	4.69	18.72	4.43	19.04	4.05
18	Intellectual Efficiency	33.57	7.04	33.83	6.61	34.36	6.12	35.47	6.19	35.99	6.05	36.26	5.80
19	Psychological Mindedness	9.49	2.69	9.22	2.68	9.02	2.77	9.93	3.01	10.15	2.90	10.18	2.93
20	Flexibility	8.80	3.74	8.86	3.66	8.77	3.86	10.04	4.12	10.28	3.87	10.34	3.70
21	Femininity	20.42	5.17	20.76	5.33	20.25	5.24	20.34	5.22	20.63	5.01	20.43	4.99
22	Leventhal's Anxiety	5.42	2.41	5.71	2.34	5.36	1.84	5.40	2.42	5.28	2.22	5.17	2.06
	VPI												
23	Realistic	2.27	2.96	2.32	2.91	2.29	2.58	1.87	2.54	1.81	2.52	1.85	2.50
24	Intellectual	4.59	4.36	4.30	4.15	4.61	4.16	4.06	4.10	4.39	4.25	4.36	4.24
25	Social	5.80	3.93	5.62	3.97	5.82	3.88	4.82	3.89	5.13	4.06	5.04	4.04
26	Conventional	3.17	3.55	3.20	3.45	3.05	3.17	1.59	2.51	1.64	2.47	1.68	2.49
27	Enterprising	3.00	3.08	2.94	3.01	3.11	2.78	2.79	2.87	2.81	2.91	3.07	3.00
28	Artistic	4.92	4.31	4.46	4.10	4.76	4.06	3.90	3.82	4.14	3.94	4.16	3.96
29	Self Control	10.41	3.84	10.24	4.18	10.63	3.73	9.93	3.50	9.72	3.49	9.62	3.64
30	Masculinity	6.30	3.04	6.48	3.07	6.39	3.04	6.23	3.11	6.05	3.09	6.12	3.14
31	Status	8.55	2.47	8.38	2.62	8.74	2.51	8.19	2.21	8.28	2.21	8.24	2.35
32	Infrequency	6.59	3.03	6.62	3.20	6.58	3.04	5.79	2.89	5.43	3.01	5.37	3.04
33	Acquiescence	10.21	6.05	10.16	5.83	10.39	5.46	8.95	4.52	9.37	4.56	9.38	4.74
34	MdGPA[b] (Individual Year)	1.82	0.67	2.13	0.74	2.27	0.74	2.20	0.88	2.63	0.70	2.81	0.68
35	MdGPA[b] (Cumulative)	1.82	0.67	1.99	0.65	2.22	0.56	2.20	0.88	2.56	0.64	2.72	0.53

[a]HSGPA is a locally standardized measure with M=3.00 and S.D.=1.00
[b]A=4; F=0

TABLE 3

Zero-Order Pearson Correlations
of California Psychological Inventory (CPI) with University Grades

CPI SCALE	BLACK FROSH. CUM. *N*=79	BLACK SOPH. YEAR *N*=58	BLACK SOPH. CUM. *N*=58	BLACK JR. YEAR *N*=44	BLACK JR. CUM. *N*=44	WHITE FROSH. CUM. *N*=193	WHITE SOPH. YEAR *N*=134	WHITE SOPH. CUM. *N*=134	WHITE JR. YEAR *N*=104	WHITE JR. CUM. *N*=104
Dominance	.07	.11	.00	.06	-.04	.12	.14	.12	.14	.12
Capacity for Status	.20	.38*	.26*	.25	.18	.15*	.21*	.25*	.14	.17
Sociability	-.01	-.06	-.05	-.10	-.17	.04	.05	.07	.00	-.01
Social Presence	.09	-.04	-.02	-.28	-.32*	-.10	-.01	-.00	-.08	-.15
Self Acceptance	.06	-.06	-.07	.01	-.12	.01	.04	.03	-.00	.01
Sense of Well Being	.26*	.20	.12	.18	.11	.15*	.22*	.22*	.14	.09
Responsibility	.26*	.28*	.25	.18	.21	.25*	.15	.19*	.13	.15
Socialization	.38*	.15	.19	.34*	.33*	.23*	.14	.14	.12	.10
Self Control	.10	.15	.10	.15	.16	.20*	.19*	.19*	.19*	.14
Tolerance	.15	.24	.15	.22	.15	.27*	.22*	.27*	.20*	.19*
Good Impression	.10	.17	.19	.17	.18	.13	.14	.16	.12	.11
Communality	.34*	.13	.14	.21	.19	.13	.06	.04	-.01	-.03
Achievement Via Conformance	.28*	.16	.13	.18	.13	.22*	.25*	.24*	.13	.11
Achievement Via Independence	.35*	.34*	.30*	.32*	.26	.32*	.37*	.40*	.24*	.29*
Intellectual Efficiency	.28*	.23	.14	.22	.10	.23*	.24*	.27*	.08	.10
Psychological Mindedness	-.08	.01	-.06	-.16	-.12	.16*	.20*	.24*	.09	.10
Flexibility	.16	.10	-.09	.24	.15	.09	.09	.05	.06	.03
Femininity	.19	-.00	.03	.20	.24	.17*	.24*	.19*	.20*	.25*
Leventhal's Anxiety[a]	-.07	-.09	-.12	-.24	-.04	-.11	-.18*	-.13	-.16	-.11

[a]Leventhal (1966)
*Significant at .05 level

TABLE 4

Zero-Order Pearson Correlations of
Vocational Preference Inventory (VPI) with University Grades

VPI SCALE	BLACK FROSH. CUM. *N*=66	BLACK SOPH. YEAR *N*=50	BLACK SOPH. CUM. *N*=50	BLACK JR. YEAR *N*=38	BLACK JR. CUM. *N*=38	WHITE FROSH. CUM. *N*=164	WHITE SOPH. YEAR *N*=115	WHITE SOPH. CUM. *N*=115	WHITE JR. YEAR *N*=99	WHITE JR. CUM. *N*=99
Realistic	.04	.14	.16	-.24	-.08	-.13	-.08	-.02	-.13	-.02
Intellectual	.02	.25	.09	-.15	-.13	.16*	.10	.19*	.04	.13
Social	.25*	.19	.24	.31	.21	.23*	.07	.09	.21*	.18
Conventional	.20	-.08	.14	-.17	-.02	-.13	-.19*	-.13	-.16	-.15
Enterprising	.08	.07	.15	-.13	-.12	.02	-.16	-.07	-.13	-.12
Artistic	.12	.19	.19	.04	.03	.25*	.28*	.30*	.16	.26*
Self Control	.17	-.13	.14	.22	.15	.01	-.06	-.14	.08	-.05
Masculinity	-.26*	-.16	-.12	-.49*	-.38*	-.25*	-.30*	-.27*	-.22*	-.27*
Status	.12	.13	.14	.01	.02	.21*	.09	.13	.16	.18
Infrequency	.31*	-.07	.09	.23	.32*	-.16*	-.05	-.13	.07	-.04
Acquiescence	.04	.17	.15	-.17	-.05	.10	.02	.10	.01	.11

*Significant at .05 level

TABLE 5

Multiple Correlations and Multiple Regression Equations
Predicting Black and White Student Grades

GRADE CRITERION	*N*	*R*	STD. ERROR OF ESTIMATE	SHRUNKEN R^2[a]	CONSTANT	REGRESSION WEIGHTS[b] WITH VARIABLE NUMBERS[c] IN PARENTHESES ABOVE
Black Frosh. Cum.	56	.73	.50	.69	-1.251	(3) (17) (13) (32) (11) (1) +.254 +.071 -.059 +.055 +.029 +.002
Black Soph. Year	49	.76	.46	.71	- .676	(3) (16) (17) (24) (26) (4) (21) (2) +.249 -.068 +.065 +.061 -.042 +.035 +.026 +.003
Black Soph. Cum.	49	.76	.42	.73	+ .299	(3) (17) (16) (33) (14) +.424 +.056 -.054 +.045 +.038
Black Jr. Year	38	.84	.41	.81	+2.027	(22) (5) (7) (20) (32) (11) -.143 +.098 -.074 +.063 +.059 +.025
Black Jr. Cum.	38	.82	.32	.78	+ .547	(3) (7) (5) (20) (11) (23) +.226 -.040 +.038 +.038 +.036 +.032
White Frosh. Cum.	118	.71	.46	.70	- .073	(3) (13) (1) +.262 +.024 +.002
White Soph. Year	115	.71	.47	.70	+1.018	(3) (30) (27) (1) +.215 -.045 -.036 +.003
White Soph. Cum.	115	.77	.38	.76	+ .237	(3) (30) (16) (1) +.220 -.031 +.019 +.003
White Jr. Year	99	.55	.57	.53	+ .653	(3) (23) (12) (1) +.156 -.056 +.012 +.003
White Jr. Cum.	99	.70	.40	.69	+ .632	(3) (30) (16) (1) +.174 -.034 +.016 +.003

[a]See Garrett, 1958, p.417.
[b]Variables added to equation until R increased by .02 or less. All R's are significant beyond .05.
[c]Variable numbers identified in Table 2.